

natural gas in india – prospects for LNG

- » Growth in India's economy and population has underpinned a strong increase in energy consumption, which is expected to continue over the period to 2025.
- » ABARE's modelling indicates that natural gas consumption in India will grow by around 5 per cent a year over that period. However, realising this potential growth in gas consumption will depend on the availability and competitiveness of gas in India.
- » India's domestic gas production is expected to increase later this decade. Over the medium to longer term, India will need to import significant additional gas supplies.
- » Liquefied natural gas (LNG) is the most likely option to meet India's gas import requirements. India's LNG imports could reach 10 million tonnes in 2015 and 31 million tonnes in 2025.
- » The significant planned expansion in Australia's LNG export capacity could potentially increase LNG trade between the two countries.

natural gas demand in india

- » Coal and oil are the main sources of energy in India. Natural gas use in India, which accounted for 8 per cent of energy consumption in 2005, rose by more than 7 per cent a year between 1990 and 2005.
- » While most of India's natural gas is sourced domestically, the use of imported LNG has grown strongly since its introduction in 2004, and now accounts for around one fifth of India's gas consumption. Indian LNG imports were 6 million tonnes in 2006, around 6 per cent of the Asian LNG market.

outlook for indian natural gas demand

- » Factors that could influence India's future natural gas demand include development of a national gas pipeline network, planned gas, electricity and fertiliser market reforms, and energy security and environmental policies. In particular, deregulation of the domestic gas market and the transition toward market based gas pricing, as well as encouraging further private participation in the gas market, will be important.
- » Based on ABARE's modelling, energy consumption in India is projected to expand by 4 per cent a year to 837 million tonnes of oil equivalent in 2025, compared with 379 million tonnes of oil equivalent in 2005.
- » Natural gas consumption in India is projected to grow by 5 per cent a year from 32 billion cubic metres in 2005 to 82 billion cubic metres (equivalent to 60 million tonnes of LNG) in 2025 in the reference case. In a high economic growth scenario, gas consumption is projected to grow by 6 per cent a year to 99 billion cubic metres of gas (72 million tonnes of LNG) in 2025.

- » Natural gas consumption is expected to grow strongly in most sectors, including electricity, fertiliser and other industries (figure A).

india's gas supply options

- » India has three options to meet the anticipated growth in natural gas consumption over the period to 2025 – increase domestic gas production; increase LNG imports; and introduce pipeline natural gas imports.
- » India's current gas producing fields are maturing and are expected to decline in the coming years. India has significant reserves of natural gas, including recently discovered fields in the Krishna-Godavari Basin that have the potential to significantly expand domestic gas production. While the first field in the KG Basin is due to start production later this decade, there is some uncertainty around the timing of new fields.
- » India will need to source additional gas supplies via imports (figure B). The requirement for additional gas is projected to reach around 4 billion cubic metres a year (3 million tonnes) in 2015, expanding to 32 billion cubic metres a year (23 million tonnes) in 2025. The additional gas requirements will be even greater in the high economic growth scenario.
- » Assuming India's additional gas import requirements are all met by LNG, India's total LNG imports in the reference case could reach 10 million tonnes in 2015, 21 million tonnes in 2020, and 31 million tonnes in 2025.
- » After 2020, another option to meet these additional gas requirements could be pipeline gas imports via the proposed Iran-Pakistan-India pipeline. However, there is significant uncertainty around the development of this project.

fig A **natural gas consumption, by sector, reference case** India

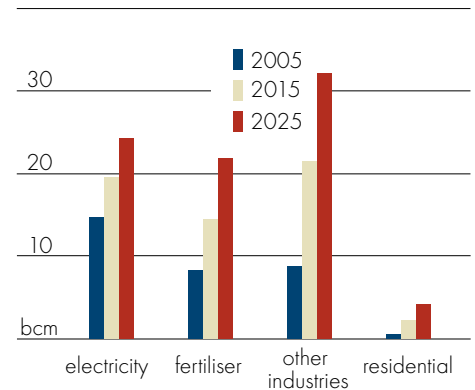
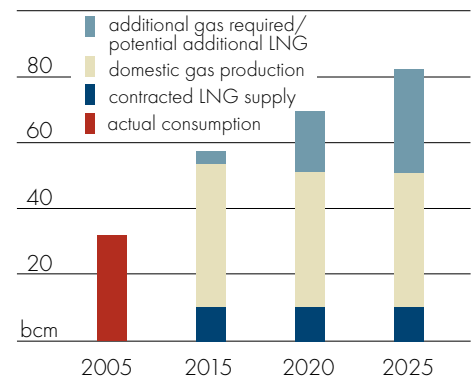


fig B **potential gas supply options, reference case** India



outlook for regional LNG supply

- » The potential volume of additional gas required will provide a challenge for India in the coming years.
- » There are currently a number of LNG supply projects in the Asia Pacific region, both under construction and planned, that would have capacity to meet India's long term gas requirements. However, many of these projects would require long term contracts with buyers to underpin their development.
- » India is also likely to face competition in the next few years from established LNG buyers such as Japan and Korea who are willing to pay higher prices.

implications for australia

- » To date, LNG trade between Australia and India has consisted of several spot cargoes. There is the potential for Australia to become a more significant supplier of LNG over the period to 2025, including to India. Australia's current LNG export capacity is nearly 16 million tonnes, with a further 9 million tonnes under construction. Planned new LNG projects could add more than 46 million tonnes to that total.
- » Other areas of potential cooperation between the two countries include research and development, the sharing of technology (for example, on development of coal seam methane resources), and investment in upstream and downstream gas sectors in each country.